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FRONT COVER

"BLACK DUCK HYBRID AND FEMALE MALLARD"
Photo by Tony DeGange

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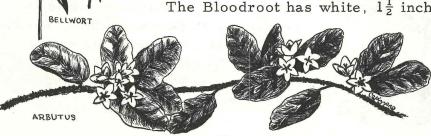
The Month Of Woodland Flowers

May encourages woodland flowers to bloom in abundance, painting fertile hillsides with a variety of colors. Several of the most common are mentioned here, but none of them should be picked . . . they play a vital role in woodland ecology, providing food and nectar for many insects and birds, enriching the soil, preventing erosion and conserving moisture for other vegetation.

One of the earliest blooming flowers protected by law, is the Trailing Arbutus or New England Mayflower. Its brown, hairy stems creep close to the ground below dead leaves. The clusters of tiny, delicate, pink flowers are often hidden among the coarse, fuzzy leaves.

Another small flower, 3 to 7 inches high, and found in moist woods as well as meadows, is the violet. The Common Blue Violet is the most plentiful, though many other species also include blue, white, yellow or bicolored varieties.

Larger flowers, all from 8 to 16 inches high can be found in rich, fertile woodlands. They include the Bellwort, Bloodroot and Trillium. The yellow Bellwort hangs gracefully from a smooth, forked stem. The Bloodroot has white, $1\frac{1}{2}$ inch





flowers that extend outward in the morning, gradually closing to an erect position in late afternoon. The Trillium, of which there are several varieties, vary from purple to white, but all are characterized by parts of 3's . . . 3 petals, 3 sepals and 3 leaves.

In moist and fertile open woods are three larger flowers from 1 to 3 feet high. The greenish Jack-in-the-Pulpit, though not colorful, is easy to identify with its graceful hood canopied over the stiff, green inner stalk called the spadix. Solomon's Seal, in the Lily family, has tiny, yellow, twin, bell-shaped flowers that hang from a long stem of many alternate leaves. The colorful Columbine, often found along stone walls in rocky soil, has intricate 5-part tubed flowers that are graded from red at the tip of the spurs to yellow in the center. The delicate 3-part leaves are subdivided into 3-part leaflets.

The last three of May's most common flowers are woody plants. Azaela blooms in late May and there are two common varieties. The shrubby azaela with pink flowers is found in rocky woods, but the white flowered azaela, also known as swamp honeysuckle, is found in marsh thickets. The Shadbush, Juneberry or Serviceberry is usually a shrub. It has 5-petalled blossoms, white to reddish, with yellow centers. Wooded hillsides are brightened by native Dogwood trees, easily identified by its horizontal white flowers and branches.

THE MAY CALENDAR

May 1... Baltimore Orioles return from the South.

May 2... Hummingbirds, our tiniest bird, and the Scarlet Tanager, one of the brightest, return to Connecticut.

May 2...Shadbush flowers.

May 3... The first Longbilled Marsh Wrens can be found along the coast.

May 4...One of our most common birds, the Redeyed Vireo returns.

May 6... Bellwort flowers in our woodlands.

May 7... Dogwood blooms in lawns and forests.

May 8... Whip-poor-wills begin calling their name.

May 10... The full Flower Moon.

May 11... Columbine can be found along woodland stone walls.

May 16... Swamp Azaela adds beautiful white blossoms to our marshes.

May 16 to 19...Spring bird migration is at its height.

May 17...Pink Ladyslippers a flower protected in our state, blooms on wooded hillsides.

May 19... Wood Pewees can be found in the trees.

May 21...Robins, bluebirds and phoebes have nested and many of the young have hatched.

May 23...Jupiter, our largest planet, is at its brightest.

May 24... Bullfrogs call nightly from ponds.

May 25...One of the latest arrivals, the Indigo Bunting, is calling from wires and fences.

May 30... Nighthawks are migrating in the evening.



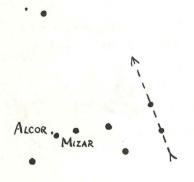
HEADS UP!

by Robert L. Dyer

By now I hope you are finding your way around the night sky without getting lost. Just in case some of you have strayed, remember that with the help of the Big Dipper, also known as Ursa Major, the Big Bear, one never need become confused about directions again. Most of you no doubt are familiar with the Big Dipper, but in case you've forgotten, start a little after sunset and face the sunset, which is west. North will be on your right and north is where to look for the Big Dipper. In May it will be upside down, high overhead early in the evening. To use Ursa Major to find north, locate the two end stars of the bowl of the dipper. These are known as the Pointers because they point the way north. Proceed by drawing a line through the Pointers from the bottom to the top of the bowl and continue in this northerly direction until you intersect a 2nd magnitude, yellowish star. This will be Polaris, the pole star and is the first star in the handle of the Little Dipper, or Ursa Minor.

Anytime you lose your bearings at night simply use the Big Dipper to help you find Polaris, and you will have found north since Polaris is located within one degree of true north. Both the Big and the Little Dippers are visible every night of the year all night long at latitudes north of Jacksonville, Florida. Even on the Equator, Polaris would be visible on the northern horizon, but the two dippers would rise and set each night.





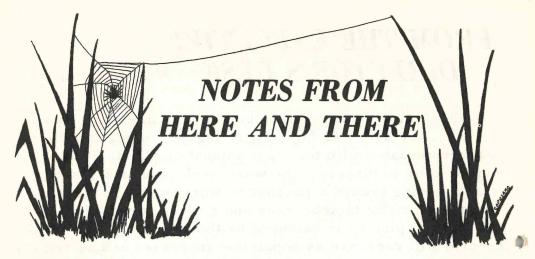
Test your eyesight on the middle star of the handle of the Big Dipper and see if you see one or two stars. Sharp eyes will detect two stars of unequal brightness very close together. These stars are called Mizar and Alcor with alcor being thecult more difficult to detect.

FROM THE EXECUTIVE DIRECTOR'S DESK By Robert S. Treat

Our future is often described in dazzling terms as a time when the demands for daily living will be nil and life's pleasures equated with the least amount of effort. This trend is easy to discern. The work week is shorter, and we are moving toward a pushbutton world with electric knives, automatic toothbrushes and remote control TV. This boring picture is balanced by the belief that individual freedom will decrease as population increases and as society becomes more organized to deal with its numbers, the individual will slowly blend into the "anonymous mass." Lewis Mumford sees a future which will become passive and purposeless.

Gloomy predictions lead to pessimism and defeatism which causes inaction, and solutions to problems are not attempted. Add our polluted air, land, and water plus mindless expansion of highways, urban developments and such rape of our natural resources both physical and aesthetic as strip mining, and our despair is complete. Is there a way out, or are our problems so immense and propelled at such speed they outstrip our ability to solve them?

Look at the nature of man and not just the predictions. Microbiologist René Dubos says "the kind of life so widely predicted for the 21st century is unbelievable... because it is incompatible with fundamental needs in man's nature. These needs have not changed significantly since the Late Stone Age and they will not change in the predictable future; they define the limits beyond which any prediction of the future becomes literally believable." Man will continue to live by his senses, and these are not much different from other animals. We are more sophisticated, but we will eventually reject excessive abstractions and mechanization in order to establish more direct contact with the natural forces from which we derive our sense of being. Perhaps this is the ultimate meaning of the SST vote, and man will save himself because of his very nature.



BLACK-CROWNED NIGHT HERONS that are accurately sighted may be reported to Mr. Robert Hernandez, River Road, Essex, Connecticut 06426, or phone your report to him at 767-1410. Information will also be accepted at the Science Center which will be relayed to Mr. Hernandez for use in his Black-crown research studies. See page 14 for more details.

BABY BIRDS AND OTHER ANIMALS FOUND in the spring are not "lost." Human presence has probably frightened away the parent temporarily, and even baby birds have fallen from the nest by one of Mother Nature's very practical laws. Though such laws of nature seem cruel and are not understood by most people, Connecticut legislation also prohibits man's interference. DO NOT TOUCH or try to protect these animals as you are upsetting nature's delicate balance. Please do not call the Science Center asking for advice on care of babies or veterinary service. We cannot sanction such acts.

GYPSY MOTH SEASON IS COMING. DON'T PANIC. Use wise sense and remember that defoliation from the caterpillars is more of an aesthetic nuisance rather than damaging, and that mass aerial spraying of Sevin is not the answer. Biological control with a substance called Biotrol is commercially available and recommended for best results. The Connecticut Conservation Association has published an excellent 5-page review on the subject. Copies may be picked up at the Science Center.

SCIENCE CENTER ACTIVITIES FOR EACH MONTH WILL NO LONGER APPEAR INSIDE THE BACK COVER OF THE NATURALIST NOTEBOOK. Activity sheets will be sent to members separately. There will be a date on which workshop registrations will be accepted...not before...in order to accommodate members who receive mail later than others, and who, in the past, have continually been refused registration because classes have already been filled. Also, one child will be limited to the number of workshops he may attend. Specific instructions will accompany each activity sheet.

GIRL SCOUT TROOP 3190 OF NIANTIC and TROOP 2177 OF ESSEX are highly commended for their efforts in collecting used glass products in those areas for recycling. Though there is very little if any monetary reward, their time and effort is worth much more to our environment overburdened by glass waste. Might other troops consider such charitable projects?

NATURE FESTIVAL DONATIONS in the form of baked goods to sell as snacks at the Festival and/or floral arrangements to be sold in non-returnable containers will be most appreciated from all who wish to participate. Please contact Mrs. Mary Costello, food chairman, at 464-2445, at least a week in advance of the Festival.

THE ANNUAL GIVING HAS RISEN TO \$5000, nearly one-third of our goal. This money goes to help defray the operating costs of our continually expanding activities. The Science Center staff thanks our many supporters for their generous donations.

BOOK OF THE MONTH: The Arthur Godfrey Environmental Reader gives a thorough and sometimes frightening view of the stage of spaceship Earth. Arthur believes mankind has only 29 years left to take action.

YOUR COMMENTS AND SUGGESTIONS ARE GRATEFULLY ACCEPTED so that the Naturalist Notebook will be to your liking. Won't you drop a card in the mail now and then to share your ideas? Ed.

NATURE FESTIVAL



PROGRAM

Registration: 9:00 A.M.

Field Trips, Demonstrations & Indoor Programs

9:30-10:45

11:00-12:15

1:30- 2:45

3:00- 4:15

Tidal Marsh
Pond Life
Rocks and Minerals
Astronomy
Edible Plants
Mist Nets & Bird Banding

Bonsai
Reptiles & Amphibians
Conservation & Ecology
Bird Identification
Trees & Shrubs
Wildflowers & Ground Covers

12:15 - Lunch Meet the Authors
Strolling Folk Singers
Treasures From the Sea

COST - All Tickets \$2.00 Per Day

Bring your own lunch. Refreshments will be sold.

aturday, June 12 and Sunday, June 13



SPECIAL EVENTS

Marine Science Boat Trip: 9:15 and 1:15

On Thames River \$3.00 per person - Age minimum 10 yrs. Scuba Diving Demonstration Plankton Sampling Bottom Dredging

Films at Buck Lodge in Arboretum

"Population and Ecology"

"Time of Man," Museum of Natural History

"Gardiner's Island, " Rob. Hernandez

"American Safari," E.P. Williams

"We the Enemy," Ellsworth Grant

Special Bird Walk in Arboretum, Sat. 8:00-9:15

Worship Service by Pond in Arboretum, Sun. 8:30

Folk Singers

An Introduction to Pollution

by Stephan Syz

The State of the Art

You can now bring some of your wastes to be recycled at the following locations:

Glass Groton: Town Garage (every day)

Groton Long Point Road

(opposite Fitch Sr. High Sch.)

New London: Coca Cola Co. (Saturday)

951 Bank Street

Eastern Conn: Glass Container Corp. (Sat.)

Dayville, Conn. 9AM-2PM

Newspaper Mr. John Novellina

158 Shaw St. 442-1772

New London (bails newspaper)

Metal, tin, iron Calamari Bros Co. Inc.

copper, steel 122 Howard St. 442-5794

aluminum, lead New London NO TIN CANS

All Organic Substances

food, leaves Compost (anytime)
clippings Your Back Yard

At present public concern for the environment is great but so much glass and paper are being brought to be recycled that some companies are refusing to accept materials or are lowering prices paid for materials. Evidently our economy does not yet include recycling.

Although recycling will increasingly become a necessity, it is now and will be only a part of the solution. Pollution must be attacked on many fronts. Reduced consumption and use of fewer environmentally damaging products go hand in hand with recycling. But how can these goals be accomplished?

Legislation created by informed scientists and ecologists can preserve our environment. In light of extensive corporate, individual and municipal environmental destruction we must wake up to the fact that glass, metal and newspaper collection projects, in the long run have the same importance as cleaning house on a sinking ship. Collections are popular activities because of their tangibility. Creating and passing meaningful laws is an activity that can also become real to citizens of all ages as well.

The <u>ingredients</u> of a bill are (1) scientific data (2) legal framing (3) choosing a sponsor (4) state-wide support expressed to legislators, committees and at hearings. The conscientious conservation activities of 5% of the people are a waste of time if 95% of the people plus industries continue to disregard ecological facts of life. You can become involved at any stage of the above process--from researching to writing legislators, circulating petitions to organizing attendance at hearings.

Some examples of needed laws include: provision for economic incentives for recycling, (This might be accomplished by requiring a percentage of raw materials to be recycled substances.) the including of costs of disposal and reuse in the price of articles, (This would reduce the rampant use of unrecyclable, non-biodegradable packaging.) taxation of pollution of air and water which belong to everyone, the prohibition of production of containers for which there is no presently available method of recycling.

We must become responsible for spaceship Earth. We have come to the end of the throw-away era. We have run out of "away". Let us switch from gestures to effective hits against pollution.



WISH ON A LADYBUG

by Ruth M. Ritter

With warm May weather the ladybugs should be appearing. The red with black spots model is the one best known, but there are over 4,000 species with one and two-tone styles. These familiar little insects are coming out of their hibernation through rocks, beneath bark, or in other dry crevices.

Ladybugs...also called lady beetles or ladybirds, are great for eating garden pests. In California there are certain hills which ladybugs use every year for hibernation. People come in the fall and collect the insects by the 100,000's, put them in cold storage, and in the spring, farmers put them in their gardens, let them thaw out, and enjoy the benefits of the creature's voracious appetite for insect pests. Both the larval and adult forms are beneficial which is fortunate as the life cycle can be as short as four weeks.

Does it seem strange that ladybugs are so brightly colored and would thus attract the attention of their enemies? Actually, their color broadcasts that they taste <u>awful</u> and that the bird, or whatever, would be much happier without ladybugs in its stomach.

In spite of its diminutive size the ladybug has collected several bits of folklore. The name itself goes back to the Middle Ages where they were highly thought of and called Beetles of the Blessed Lady! The Nursery rhyme: "Ladybird, ladybird! Fly away home. Your house is on fire. Your children do roam. Except little Nan, who sits in a pan, weaving gold laces as fast as she can," is familiar to many of us. It began on the Continent where the hopvines were burned after harvest. The vines were usually loaded with aphids and Ladybird's "children" which were eating them. "Nan" is the yellow pupa and therefore can't roam. Thus this little rhyme really tells about the life cycle of the ladybug. Making wishes on ladybugs is another bit of lore which you can take advantage of in May.

GROWING GOOD FOOD

By Martha Capizzano

Control of garden pests is one problem of most concern to growers, but understanding a few simple rules of survival will help alleviate many of those little six-legged nuisances.

- 1. Sickly plants are most prone to insect infestation. Keep your garden healthy. Water it frequently if there is a lack of rain. Keep it free of weeds...an organic mulch will control weeds and next year can be used as a fertilizer. Feed the soil with a good supply of organic fertilizer before planting, at the time of planting and in the fall. DO NOT USE CHEMICAL FERTILIZERS.
- 2. Do not plant all plants of the same kind in the same place. Mother Nature follows this rule without fail...a natural forest of many species is less prone to disease than an acre of "regulated" apple trees.
- 3. Plant flowers in your vegetable garden and vice versa. Marigolds with your tomatoes and nasturtiums with your radishes keep away harmful insects. Garlic is also a good insect repellent.
- 4. Encourage natural predators of harmful insects. Attract birds as they eat huge numbers of insects daily. Also, the ladybug (opposite page) and the preying mantis both insects themselves survive on a steady diet of other insects such as aphids, mites, cut worms, earwigs, etc, etc, etc. Japanese Beetles can be controlled by Milk spore available from the Fairfax. Biological Laboratory, Clinton Corners, N. Y. or can be ordered from many gardening magazines.

Growing good food may mean an occasional worm in a vegetable or fruit that can easily be cut out, or a few spots on your tomatoes, but it won't spoil their taste...be assured that it will improve their quality if you use wise gardening sense.

HERON STUDIES

by Robert Hernandez

The Black-crown Night Heron is one of the most familiar and was at one time the most common member of the heron family in New England. Often identified by his loud "quawk" call, the Black-crown is a marsh feeder, his crouched figure seen stalking his prey of frog, crayfish, mouse or patiently waiting for a small fish to come within darting distance of his black bill. Often confused with the Yellow-crowned Night Heron, his black back and white underparts serve to distinguish him from his all black relative.

However, the Black-crown has in the last ten or fifteen years been experiencing a population decline. Disturbance of nesting colonies, and drainage and altering of wetland feeding areas have all been contributing factors. Some estimate this has reduced the population to between $\frac{1}{4}$ to $\frac{1}{2}$ of former numbers. But perhaps more important than the loss of habitat (other members of the heron family have increased their numbers despite loss of habitat, i.e. Snowy Egret, Glossy Ibis) is the presence and widespread use of DDT and other chlorinated hydrocarbons in the environment. The resulting loss of breeding capability through eggshell thinning and breakage has already been documented in the near extinction of the Osprey as a breeding bird in Connecticut as shown in the studies by Mr. Paul Spitzer.

The Black-crown is in the same position on the food chain as the Osprey, both of which are consuming concentrated amounts of pesticide residues through their prey. However, the effect of pesticides on the Black-crown has not been documented to date. It has, however, prompted this author, (with a grant from the Conn. Research Commission) to undertake a study of the Black-crowned Night Heron to determine its numbers, breeding colonies, breeding success and associated factors in New England and Long Island. Eventually it would be expanded to a full ecological study of the species to determine such questions as why are the Black-crowns more susceptible to pesticides than the other species of herons, what pollutants are affecting the decline, and more.

FIELD NOTES

March 10 - April 10

Spring is here, and there is much evidence of it at a moment's glance. Buds are swelled and beginning to open on the RED MAPLES, but the maple sap season is over. PUSSY WILLOWS have bloomed around ponds and evenings are filled with the mating calls of SPRING PEEPERS, WOOD FROGS and other amphibians that leave hibernation and congregate in ponds to lay their eggs. Lawns are filled with the colors of CROCUSES, DAFFODILS, TULIPS, HYACINTHS and other early flowers. Overhead, many flocks of birds can be seen and heard, as migration season reaches its height in mid-May.

Mystic, Stonington and Groton: On March 20 2
COMMON EGRETS were at Barn Island and one was spotted
in Noank. An early OSPREY was sighted at Barn Island
on the same day. A PIPING PLOVER was at Groton Long
Point on March 28 and a SNOWY EGRET was on Barn Island.
A CHIPPING SPARROW was seen off Route 184 in Mystic

on March 30.

Waterford, Montville and New London: An unusual RED-HEADED WOODPECKER has been a regular suet feeder visitor on Carriage Hill in Niantic. 3 COMMON LOONS have been at Magonk Point in Waterford all during the month of March, WOOD FROGS were seen and heard in the Arboretum on March 16. The first OSPREYS of the area were sighted on March 26, 2 at a nest on Black Point and l at Rocky Neck. A FLICKER was singing at Magonk Point on the 28th and on the 29th, a RED-NECKED GREBE in full spring plumage was sighted there. 30 BALDPATE were at Harkness Cove on the 29th. The last day of the month of March brought a PHOEBE to Montville. SPRING PEEPERS were calling in Waterford on April 2, and on the same date a mature BARRED OWL was found dead on the road at Lake Konomoc. April 4, another casualty occurred when an immature RED-SHOULDERED HAWK was killed by hitting a window at a house on Old Colchester Road. HELLEBORE leaves were already popping through the ground on April 4 in Waterford, and SPOTTED SALAMANDER egg masses were found on the 5th.

Lyme, Essex, Hadlyme and Haddam: An early TURKEY VULTURE was sighted in Hadlyme on March 12 and on the 16th, a PHOEBE was there. SPRING PEEPERS were calling in Essex on the 15th of March and on the 17th, a CAROLINA WREN was sighted in Hadlyme. Another TURKEY VULTURE was sighted in East Lyme on the 17th and 3 remarkably late EVENING GROSBEAKS were in Old Lyme on the same date. A pair of RED-BELLIED WOOD-PECKERS are nesting in Old Lyme. 25 GREEN-WINGED TEAL were in Old Lyme on March 18th and on the 19th a RED-BREASTED NUTHATCH was sighted there. The first OSPREY on Great Island was seen on March 29th. An immature BALD EAGLE was in Old Lyme. April brought 28 CEDAR WAXWINGS to Great Island. The 5th of the month was eventful with a GREAT HORNED OWL, apparently not nesting, in the Blackhall River area. A pair of RED-SHOULDERED HAWKS were performing aerial courtship in Essex and a DOUBLE-CRESTED CORMOR-ANT was seen near Sheldon Creek, remarkably upstream for that species. Many flocks of GREEN-WINGED TEAL are in the Deep River marshes. By April 5th, 4 OSPREY nests are apparently active, one at Griswold Point, and 3 on Great Island.

Rhode Island Shoreline: The "rare bird alert" on the BARROW'S GOLDENEYE, first reported on March 1 was still in residence on Charleston Pond by the 21st. A RED-SHOULDERED HAWK was sighted in Westerly on the 13, and on the 14th, 2 ICELAND GULLS were seen by the New London County Bird Club's trek along the shore... one was at Galilee and one was at Narragansett. 3 SNOW GEESE were among a flock of about 500 CANADA GEESE at Moonstone Waterfowl Wildlife Refuge on the 14th, and a MARSH HAWK was seen there on that date also and again on the 21st. On March 20th, an adult BLACK-HEADED GULL in spring plumage was at Weekapaug along with a MARSH HAWK and 11 WOOD DUCKS were in Westerly. The first TREE SWALLOWS were sighted at Charleston on March 21.

Contributors to this column were: G. Bissell,

- L. Brooks, M. Capizzano, J. Coale, T. DeGange,
- B. Dewire, B. Dyer, S. Finch, H. Gilman, M. Hasse,
- R. Hernandez, B. Kashanski, W. Moran, A. Pfeiffer, Mrs. G. Smith, E. Saunders and N. Watkins.

A PICTURE TO COLOR



PINK LADYSLIPPER

A MAY WOODLAND FLOWER. IT IS AN ORCHID.

NATURALIST NOTEBOOK

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The active support of children and adults in the Science Center, its programs, activities and efforts is earnestly solicited.

> MARTHA M. CAPIZZANO Editor

Non-Profit Org. Quaker Hill.

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